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NOTES OF CASES OF PLEURISY AND PARACENTESIS THORACIS.

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VI.—J. R., aged 29, farmer, entered the hospital Nov. 7, 1873. He had variola last winter, and has not felt so strong since; twelve days ago he had chills and the following day dyspnœa; ten days ago he had to leave off work and began to cough, the expectoration being slight, white and frothy. After the cough began, he had pain in side; the dyspnœa now became very great, and he was most comfortable in a sitting posture. When lying down, can rest best on right side. Temperature 102.1°. Pulse 114. Respiration 36.

Right chest flat throughout front and back; bronchial respiration and bronchophony over whole of right chest; no râles; intercostal spaces somewhat bulging; apex beat of heart in line with left nipple. Diuretics and tincture of iodine to the chest.

Nov. 10th and 11th.—Resonance and vesicular respiration at right apex, front and back. Subcrepitant râles occasionally heard over right front and upper part of back.

Nov. 15th.—Dulness diminishes daily.

Dec. 13th.—Right front dull below lower border of third rib; no change in lying down; right back dull nearly as high as spine of scapula; respiration feeble all over right back and almost imperceptible at base.

Jan. 9th.—Murmur at apex of heart following first sound; abdomen is distended and area of splenic dulness increased.

Jan. 15th.—Paracentesis performed, but owing to imperfection in aspirator only one ounce of very slightly bloody serum was withdrawn.

Jan. 30th—Right chest hyper-resonant, with loss of tone commencing one inch above nipple; amphoric respiration upper two-thirds, with mucous râles at lower third most marked on inspiration; respiration exaggerated over left front, with mucous râles at lower half of chest; want of tone over lower half of both backs and absence of respiration in lower third of each back.

Feb. 8th.—On full inspiration sibilant and sonorous râles with distant pleuritic rubbing were heard over lower half of left front. Mucous râles were heard in lower part of front of right lung.

Feb. 12th.—Thoracentesis again performed; 5½ ounces of serum tinged with blood were withdrawn.

Feb. 14th.—At his request he was discharged, relieved.

VII.—J. K., aged 18, laborer. Entered hospital Dec. 26, 1873.

Patient was never sick before. Three weeks ago had a chill, followed by cough and stitch in lower part of right chest. No expectoration till two days before entrance; sputum whitish and frothy; has considerable dyspnœa since cough began; has worked till six days ago, but has wasted rapidly. Temperature 101.4°. Pulse 104. Respiration 36.

Right chest does not expand on inspiration; intercostal spaces obliterated, and this side measures one inch more than the left; left apex dull; expiration prolonged at both apices with harsh inspiration. Right back dull above spine of scapula, and flat below; respiration bronchial and very feeble below spine of scapula. Right front dull to level of nipple when sitting; line of dulness changes on lying down. Diuretics and tincture of iodine to chest.

Jan. 11th.—Respiration heard to within an inch of right mamma; dulness back and front as before. Bronchial breathing heard through right back, more marked in lower half than before.

Jan. 16th.—Thoracentesis performed and 24 ounces of pus withdrawn.

Jan. 20th.—Much cough and sweating since operation; examination of right lung posteriorly same as on Jan. 11th.

Jan. 22d.—Discharged at own request, relieved.

VIII.—P. K., aged 42, baker. Entered hospital February 5, 1874. Family history good. General health good. Had epithelial disease of lower lip removed last July. Is addicted to drink. Eleven weeks ago was seized with a severe chill, which was followed by fever, pains in epigastrium and night sweats; some dyspnœa and palpitation on slight exertion; cough slight; was confined to bed for a day or two; laid on right side, and lost flesh and strength. Nine weeks ago noticed swelling of abdomen; four weeks ago œdema of feet appeared; has been troubled with hæmorrhoids for ten weeks past; has not had nausea, vomiting, indigestion, lumbar pain, headache or increased urination. Dyspnœa has increased the past month.

Is now much emaciated; countenance sallow and anæmic; slight cough; abdomen somewhat distended, but no fluid appreciable; slight œdema of feet.

Feb. 6th.—Some fulness and immobility of left back and slight œdema of integument. Dulness over left back from lower third of scapula, on right side from angle of scapula. Entire absence of respiration at each base; rubbing heard at posterior border of left scapula; dulness under left clavicle, and at lower part of each chest; friction heard above right nipple and mucous râles; rubbing sound also heard over middle of left front; liver dulness five inches in mammary line, five and one-half in axillary; nothing felt on deep palpation.

Feb. 13th.—Œdema much less; right back has cleared up entirely; dulness and distant respiration over lower portion of left.

March 7th.—For some nights has been unable to sleep except on right side; no œdema of legs. Hepatic dulness extends one inch below the border of ribs; left chest prominent, intercostal spaces nearly obliterated; has expansion of chest; complete dulness over whole of front; apex beat of heart felt to right of sternum; complete dulness over left back and tubular breathing along posterior border of scapula; paracentesis performed, puncture being made two inches below angle of scapula; nearly seven pints of serum were withdrawn.

March 8th.—Complete dulness below lower third of scapula; subcrepitant râles along upper half of posterior border of scapula; distant respiration to angle, and absence below. Heart sounds more to the left; some pitting over sternum.

March 20th.—In front, resonance to half an inch above left nipple; behind, to one and one-half inches below spine of scapula. Respiration heard to one inch above angle of scapula and absent below. Respiration in front same as at last record.

Paracentesis again done; four pints of serum withdrawn; the back immediately became resonant to angle of scapula, and respiration is plainly heard to this point.

March 28th.—Back still flat over lower portion, with some want of tone above. Respiration heard throughout left back, with subcrepitant râles at base.

Discharged, relieved.

IX.—W. F., 20 years of age, waiter. Entered hospital Feb. 25th, 1874. Family history good. Constitution and general health good. Was well up to a month ago. About that time he commenced to cough a little in the morning; this continued, but his appetite and strength remained good; four nights before entrance the cough grew worse, and pain came on in left side of chest. Next day felt very sick, feverish, without chill; has never had hæmoptysis.

Present condition, in bed, feeling very weak. Body well nourished; nails slightly clubbed; red line along gums; skin hot and dry; tongue thickly coated; thirst; coughs a good deal; says sputa are thick and yellow. Temperature 103.5°. Pulse 108. Respiration 18.

Feb. 26th.—Want of tone over left front. Respiration distant; on full inspiration, mucous râles are heard through left front, most marked below second rib, and occasional sibilant râles; right front respiration exaggerated; want of tone in left back, dull at base; distant crepitant râles at middle of back, with absence of respiration at base; cardiac sounds normal.

March 1st.—Examination of chest as before; except respiration through back, is more bronchial.

March 6th.—Left back dull and flat over lower half; entire absence of respiration below upper third of scapula; bronchial breathing at junction of upper and middle thirds of scapula; less expansion of this side; sounds of heart heard most perceptibly at right of sternum; left chest dull except at apex.

March 10th.—Paracentesis thoracis; four pints of serum withdrawn.

March 11th.—Dulness much diminished over left back; still perceptible over lower quarter. Respiration heard down to an inch above angle of scapula, with occasional subcrepitant râles.

March 25th.—Still want of tone over left back and flatness at base. Respiration heard to angle of scapula; absent below. Paracentesis, and one pint of serum withdrawn. Back become much more resonant and respiration was heard throughout.

March 30th.—Discharged, well.

X.—J. C., aged 26, laborer. Entered hospital March 10th. Family history obscure. Constitution and general health good. Three weeks ago was taken with pain in left side, which was increased by full inspiration, and accompanied by a dry cough and chilly sensations. Pain and cough have continued, although the pain has been less severe

and more of a dull character. For past two weeks has had dyspnœa; has lost flesh and strength; now sitting up; cough frequent; complains of pain in chest and weakness; tongue natural; appetite fair. Temperature 100°. Respiration 20. Pulse 92.

March 11th.—Left chest rounder; intercostal spaces full; very little expansion; apex beat of heart just to right of median line; dulness over upper fourth; flatness over rest of left back. Distant respiration heard above spine of scapula; none below. No respiration was heard below third rib in front. Paracentesis performed and five pints of serum withdrawn.

March 12th.—Dulness commences one inch above spine of scapula, passes downwards and becomes flat at base; still want of tone through left front, becoming flat on line with nipple. Respiration heard through left front to line of nipple, slightly tubular in character; apex of heart now beating one and a quarter inches to left of sternum. Tincture of iodine to chest. Quiniæ sulph. gr. ii. three times a day.

March 18th. Upper half of left back of almost normal resonance. Front of chest quite resonant. Respiration heard plainly to angle of scapula, and on full inspiration two inches below.

March 30th.—Still slight want of tone lower half left back, but respiration is heard throughout.

April 3d.—Discharged, well.

XI.—B. McD., 25 years old, laborer. Entered hospital Dec. 27, 1873. Family history good. Was in the hospital last August for pneumonia; slight cough continued after leaving hospital, accompanied with chest pain and some expectoration. Last October, after exposure, cough became worse, with pain in chest, increased expectoration and dyspnœa, followed by loss of flesh and strength. During the fall had been intemperate; right chest dull throughout, slightly bronchial respiration, and a few moist râles at right apex. Bronchial breathing and bronchophony over upper half right back, with moist râles throughout right back. At a limited spot near inner end of spine of scapula, amphoric respiration; also well marked bronchophony, with coarse mucous râles.

During January he gained strength, with but little change in physical signs.

Feb. 2d.—Dulness was found over lower third of right back, with distant respiration over upper two thirds, and absence of respiration in lower third; considerable dyspnœa.

Feb. 6th.—Dyspnœa has greatly increased. Dulness over middle of right back, becoming tympanitic towards base; some want of tone upper fourth left back. Respiration left back puerile, with mucous râles at base. Lower half right back amphoric respiration; mucous râles middle third.

Feb. 14th.—Respiration exaggerated through left front, with mucous râles over lower two thirds; want of tone through right front, with absence of respiration below second rib; want of tone through right back; respiration distant, on forced inspiration heard to one inch below scapula, with occasional dry and mucous râles; amphoric cough over lower fourth. Right chest very prominent. Succussion sound very marked.

Feb. 22d.—His general condition seems improved, though the liver is displaced downwards, and a murmur with first sound of heart is heard one inch to the left of sternum.

March 19th.—Right chest rounder; intercostal spaces obliterated; very slight expansion; dulness over front becoming flat at base. Entire absence of respiration except very distant at apex. Left front, tubular breathing with subcrepitant râles over lower two thirds; apex beat of heart at left nipple; right back, distant respiration above spine of scapula; subcrepitant râles to the middle; distant respiration, tubular in character and probably transmitted over rest; left back, respiration tubular, with subcrepitant râles lower third.

March 21st.—Exploring trocar introduced; one ounce of sero-purulent fluid withdrawn.

March 28th.—Paracentesis again performed; no fluid followed. Air to a considerable amount was withdrawn, with relief to patient.

June 1st.—Still in hospital. Slowly losing ground from progressive phthisis.

XII.—M. McN., 24 years old, domestic. Married. Entered March 21. Family history obscure. Says she was always well till a year ago, when she became troubled with rheumatism and swelling of leg.

About a month ago, after exposure to wet and cold, had a severe chill followed by pain in chest, becoming fixed in left side, and greatly exaggerated by full inspiration. Cough came on, with scanty expectoration. These symptoms have continued, the dyspnœa gradually increasing. Has lost much flesh and strength.

Now in bed; much emaciation; lies most comfortably on left side; breathing labored; constant pain and tenderness just below left nipple, where there is slight emphysema and discoloration; cough troublesome; profuse muco-purulent expectoration. Temperature 100.2°. Respiration 28. Pulse 100.

March 23d.—Want of tone through left front, with complete absence of respiration; amphoric cough under left clavicle; right front, respiration puerile. The cardiac sounds are distant; apex beat most distinct one inch to left of epigastrium. Left back completely dull, becoming flat over lower fourth. Above spine of scapula, respiration is distant and bronchial; absent below; right back, respiration exaggerated.

March 25th.—Mucous râles upper fourth left front on inspiration. Bronchial breathing with dry and moist râles through rest of left front. Patient apparently sinking. Paracentesis performed two inches below angle of scapula; no fluid followed, except a slight oozing of blood; the lung (?) was felt against end of trocar. The operation seemed, however, to relieve the depression of patient, as on the following day her general condition was much improved. Dr. Bowditch mentions noticing the same effect in some of his cases.

April 7th.—Dr. Edes inserted slowly a fine exploring trocar two inches to the left of my puncture, and withdrew 20 ounces of pus.

April 8th.—Resonance extends two fingers' breadth below spine of scapula, and respiration is stronger over this space than yesterday.

April 11th.—At point of emphysema already mentioned, there is a bulging when she coughs, which immediately subsides, accompanied by coarse crepitation.

April 20th.—Aspiratory needle introduced by Dr. Edes at the reddened spot in front, drawing off only half an ounce of pus. An opening was then made in the same place with a bistoury, a pint of pus was evacuated, and a drainage tube was introduced.

May 4th.—The opening still drains a few drops of watery serum.

May 15th.—Percussion resonant over left chest. Respiration almost entirely absent over left side, except at extreme lower part.

CONCERNING THE CAUSE OF GANGRENE FOLLOWING THE LIGATURE OF LARGE ARTERIES OF THE LOWER EXTREMITY.

By E. Warren Sawyer, M.D. (Harv.), of Denver, Colorado.

Read before the Territorial Medical Society of Colorado, June 25, 1874.

Writers of surgery give proper prominence to the danger of gangrene attending the cutting off of the arterial supply of an extremity, but as far as my researches have extended, no one has attempted an explanation of the *primary* cause of gangrene, or, rather, no one has drawn attention to the complication or condition upon which gangrene depends under these circumstances.

I was led to this inquiry, while house surgeon at the Boston City Hospital, by two nearly simultaneous cases of ligature of the external iliac artery.

The first, in the service of Dr. Cheever, was that of a healthy boy, of 15 years, who had been stabbed in the left groin, while in a quarrel with a companion. He had bled to a state of unconsciousness when assistance reached him. Hæmorrhage was arrested by a compress and spica bandage. He revived under stimulants and was brought to the hospital. The exterdal iliac artery was afterwards tied, just above Poupart's ligament. Extensive death of the limb followed, which necessitated, finally, the amputation of the thigh, in its lower third.

The second case, in the service of Dr. Thorndike, was that of an old man, a syphilitic, in every respect a more unfavorable subject for operation than the first, who presented himself with an aneurism of the right external iliac artery. This artery was tied near its origin, but there was no death of the limb following.

In the Boston Medical and Surgical Journal of March 19, 1874, Dr. Pineo, of Hyannis, Mass., reports a case of wound of the femoral artery, from which the patient "lost, in a short time, a large quantity of blood, producing partial syncope." The artery was tied at the point of injury. Two weeks afterward, the thigh was amputated, "at the lower part of the middle third," for gangrene of the limb.

Within a year, two cases have occurred in my practice, in which I tied the large artery of the lower extremity.

The first was that of a strong young man, who had been shot in the groin, wounding the artery. He had bled profusely, and was collapsed when I saw him. After stimulants had been used, under ether, I tied his external iliac artery. Twelve days afterward, I amputated his thigh in its lower third for death of the limb.

In the second instance, the subject was also a young man, who had received a pistol ball in the upper third of the thigh, on its anterior aspect. There was no hæmorrhage, and the man alighted from his carriage and walked up stairs to his room without assistance. Twelve hours afterward, I was called to him. On enlarging the small penetrating wound of entrance, I introduced my finger, which followed readily the track of the bullet, between the integument and fascia

lata. Nearly two inches below the wound of entrance, I came upon a slit through the fascia; into this I forced my finger, and upon withdrawing it there was a gush of blood which could come only from a wound of a large vessel. The amount of blood lost did not exceed two ounces, when I arrested it with pressure, firmly applied. The patient etherized, I cut down and found the femoral artery wounded near the apex of Scarpa's triangle, at which point I applied the ligature, above and below the wound. The bullet was not found. The recovery was complete, without gangrene.

I may say, in this connection, that in three of the instances to which I have alluded, was verified the apparently anomalous, and, as far as I am aware, inexplicable phenomenon, to which Dr. Cheever first drew my attention; viz., a rise in the temperature of the foot immediately after the ligation of the iliac or femoral arteries. As collateral circulation is established in the limb, the temperature resumes a normal degree, but gradually becomes lower in those instances in which death of the limb follows.

The object of this review of these cases is an explanation of the cause of gangrene in some instances of ligature of large arteries, and the absence of gangrene in other instances.

It may be offered that in the case of aneurism, lasting for years, the obstruction to circulation is slowly effected, and that collateral circulation is established in a gradual, compensatory manner; so that, when the supply of blood is finally cut off by the ligature, the circulation is so well established that the integrity of the limb is preserved.

This idea could not be advanced in explanation of the safety of the limb in the last instance which I detailed, for, in this, the entire blood supply was suddenly cut off, and the demand for collateral circulation as suddenly made; still the limb did not die.

An unfortunate case occurred in the practice of a medical friend, which, also, would not admit of this explanation. A man presented himself with a tumor of the groin, just below Poupart's ligament. This was mistaken for an abscess, and opened in a very heroic manner. A profuse hæmorrhage followed the incision, which was not controlled till the femoral artery had been tied above. Extensive gangrene and amputation of the limb followed. Further examination showed the tumor to be an aneurism.

It cannot be denied that the situation of the ligature is of great importance in the consideration of the cause of gangrene,—as we approach the aorta, the avenues of collateral circulation are diminished.

That the point of ligature is not alone the determining cause of gangrene, seems proved by the result in the second case of this review—of the old man with the aneurism, in whom the ligature was applied to the external iliac, near its origin, yet no death of the limb supervened. And further by Dr. Pineo's case, in which the ligature was applied to the femoral, far below the origin of the great profunda, notwithstanding which there was extensive gangrene of the limb.

A study of these and other cases has convinced me of an existing relation between the loss of blood and the death of the limb.

To recapitulate: in those cases where the hæmorrhage had been profuse, gangrene followed; while in those instances of ligature for aneurism, and for a wound of the artery, *in which the loss of blood was inconsiderable*, the integrity of the limb was maintained.

The reason of this is obvious: the circulation through one lower extremity comprises, in extent, nearly one-fourth of the entire arterial circuit; cutting off the blood supply from one-fourth of the arterial circuit, the normal column of blood not diminished, throws a greater volume of blood into the still patulous arterial circuit; produces, in fact, a congestion; which congestion, *cæteris paribus*, is the condition most favorable for the rapid dilation of the branches of the vessel which has been cut off. In other words, the heart, having an abnormally large volume of blood to propel, a volume too large for the diminished arterial circuit, forces, mechanically, the establishment of a collateral circulation.

On the other hand, when there has been a great loss of blood, the diminished volume, now abnormally small, will be propelled through the branches of the occluded, or ligated vessel, only to the extent of distributing the blood uniformly; that a collateral circulation is established proportionate, in extent, to the volume of the blood; further, the death of the limb is most extensive when the hæmorrhage has been greatest.

The truth of this dependence of the death of the extremity upon the loss of blood, can only be determined by a more extended observation than I have yet had. If correct, this thought may have some practical value; first, in emphasizing the indication which already exists, viz., to save all blood possible. Secondly, it has some prognostic value; for, in a given case, if the hæmorrhage has been profuse, we are enabled to foretell the death of the limb.

A VERY LARGE TUMOR OF THE FACE AND NECK TREATED BY CAUSTICS.

By W. R. Howes, M.D., of Hanover.

Mr. S. T., of South Scituate, farmer, aged 53 years, in May, 1873, showed me an enlarged parotid gland of the right side, and wished advice in regard to treatment. He stated that it had been growing nine months, and for the most part of the time had caused him much pain.

It was about the size of a hen's egg, quite movable, smooth, firm and elastic. He was advised to have it removed by excision without delay, but neglected to do so until the last of August, when it had become so formidable that the surgeon to whom he applied assured him that such an operation was impracticable.

Sept. 6th.—The tumor is growing with frightful rapidity, and has doubled its size within a month, measuring 10½ inches across, and projecting two-thirds of the distance to the points of the shoulder upon which it rests.

The surface is of a purplish red color and very vascular; but there is no appearance of ulceration, though, for two months, there has been a profuse discharge of transparent serous fluid, which leaks out through numerous minute openings. The skin around the base appears perfectly healthy, and the infiltration probably does not extend beyond the limits of the growth.

The patient is not cachetic, though much weakened and emaciated by suffering. A rigid adherence to regimen for two weeks has slight-

ly improved his condition, and he is now very importunate that some means should be tried to alleviate his distress.

With the intention of arresting the rapid cell-growth, an ounce of dilute acetic acid (40 per cent.) is injected into the upper and posterior parts, where it is well retained.

Sept. 8th.—The acid has not increased the pain, but there is considerable irritation at that spot, as shown by increased redness and swelling on the surface.

Sept. 10th.—The irritation has subsided and the skin is brown, lax and wrinkled. Injection repeated.

Oct. 8th.—The acid was injected at intervals of three or four days, for a fortnight, when an opening appeared in the skin near the apex, plugged with a brown slough. This was loosened by a linseed poultice, and some shreds of lint saturated with a very strong solution of chloride of zinc were inserted by the side of it, and in a couple of days it came away, leaving a cavity about as large as an English walnut, which was packed with lint saturated as before, and this dressing has been repeated daily, removing the debris as thoroughly as possible without causing pain, until the cavity measures 3½ inches and the opening 1½ inches in diameter. The substance around this cavity is firm, the surface wall standing out rigid, like a shell, maintaining the form of the tumor, which is now considerably diminished in size. An attendant says, "It is just the place for a bluebird's nest," and the conceit is not inapt.

There has been no hæmorrhage except a slight oozing when scraping out the debris closely. The opening in the skin does not enlarge by ulceration, but the margin crumbles away by a process of disintegration; and in this manner another opening is beginning to form about two inches from the first, towards the cheek, where the shell has become thin.

The substance removed is of a greyish color, and consists, for the most part, of fibrous shreds and patches, resembling the husks of the cocoa-nut, or fragments of rotten Manilla cordage.

The patient is cheerful, eats and sleeps well, takes plenty of outdoor exercise, and is almost free from pain, except for a few hours after the dressing. His general health is very much improved. Same applications continued.

Oct. 25th.—The isthmus of skin between the openings has separated, and the shell retracts from the centre and turns outward, presenting a concavity as large as a coffee-saucer and almost as deep. As the lint cannot be confined conveniently, a paste is substituted, made of the chloride of zinc and wheaten flour. This is spread upon cloth and covered with cotton batting.

Nov. 4th.—At the anterior margin, the shell is removed to a level with the healthy skin, and a perfect line of separation is deepening between this and the slough. To-day, the patient has violent erysipelatous inflammation of the eyelids, nose and lips, caused by exposure to cold and dampness, necessitating a suspension of the caustic.

[This inflammation was relieved in a few days, but the demoralizing effect was signally unfortunate. Hitherto quite patient and yielding, he now became peevish and intractable. It was the last straw to the camel's back, and from this time he could never be prevailed upon to take exercise and nourishment as the urgency required.]

Nov. 18th.—A slough has separated from the anterior half of the ulcer as far back as the ramus of the jaw, exposing a clean, healthy, granulating surface, which is dressed with carbolic acid and glycerine.

Dec. 4th.—The remainder of the disease has sloughed out, leaving an ulcer which measures five and a half inches in diameter, and appears healthy throughout. The anterior portion has been healing satisfactorily for several weeks.

Dec. 20th.—The ulcer now measures four and a half inches at its longest diameter, and is healing very slowly, though there is nothing unfavorable in its appearance.

The patient has taken no exercise of consequence for more than six weeks, and takes nourishment unadvisedly and irregularly. Though getting more anæmic, his strength and appetite are quite good, and he is hopeful. When urged to observe a regimen which he is assured must be an essential condition of recovery, he replies that his flesh heals so readily that the sore will get well under any circumstances.

From this time there was little healing, and gradual failing of the general health until Feb. 20th, when he died without suffering. For a week previous, the surface of the ulcer was covered with an ash-colored exudation; there being scarce any discharge, and so little pain that the patient declared he should not know it was there from any suffering it caused.

Progress in Medicine.

REPORT ON ANATOMY.

By Thomas Dwight, Jr., M.D.

(Concluded from page 231.)

The Circulatory System.

Observations and Notes on the Arteries of the Limbs.—Mr. Thomas W. Nunn, of London, writes on this subject in the *Journal de l'Anatomie et de la Physiologie*, Jan. et Fev., 1874. Though he does not give much that is new to the practical anatomist, and though some of his ideas are purely fanciful, his general plan may be of use to teachers and students. The main artery of each segment of a limb divides into two chief trunks, of which one runs onward, giving off few branches, and but slightly decreasing in size, to carry the blood from that segment to the next, while the other divides into a number of small branches going to nourish the segment in which it arises. Nunn calls these two chief trunks the transegmentary and segmentary, respectively. As typical examples of the first kind, we have the external iliac, the femoral and the posterior tibial; of the second, the internal iliac, the profunda and the fibular. In the upper extremity, at least above the elbow, the plan is not quite so simple. The segmentary arteries are smaller and given off separately, instead of from a common trunk; but Nunn shows that, in anomalous cases, there is a tendency to return to the typical plan; thus Quain has shown that, in 115 out of 478 cases, the superior and inferior profunda arteries, sometimes with other branches, are given off from a common trunk. So far Mr. Nunn's generalizations are very good; but he goes on to form two

more classes, one of anastomotic and one of composite arteries, that are so wanting in definite characteristics and so liable to variation that they tend solely to confuse.

The Cerebral Circulation.

H. Duret, whose researches on the circulation of the medulla oblongata we have noticed in a previous report, has published a very valuable and exhaustive paper on the circulation of the brain, in the first two numbers for 1874 of the *Archives de Physiologie*. The remarks on the circle of Willis are interesting and of practical value. Although there is considerable variation in the size and points of origin of the branches of the internal carotid, the ophthalmic arises always from the main trunk; an arrangement calculated to preserve the circulation of the eye and the anastomosis with the external carotid, in spite of the closure of both the anterior and middle cerebral. The posterior communicating, on the other hand, frequently arises from the middle cerebral instead of the carotid; a variation of some importance. Indeed, it seems as if the abnormal arrangement were the most desirable, for if a clot too large to enter either of its subdivisions be arrested at the end of the internal carotid, the circulation in the middle cerebral cannot be reëstablished except by very devious and insufficient channels; but if the posterior communicating open into it, it will be supplied from the posterior cerebral. In either case, the anterior cerebral will be supplied from the other side. The author dwells on the scarcity of communications of the branches of the carotids with each other and with those of the opposite side, and states that the branches of the vertebrals anastomose freely. The arteries of the corpora striata are divided into an external and an internal group, and come from the middle cerebral, excepting a few inconstant ones from the anterior. Their course, at first, is upward and outward, after which they turn forward, forming externally convex curves. They have no anastomoses with other arteries, nor with each other, and end in small "brushes" of branches. The arteries of the optic thalami are similarly arranged, and come from the posterior cerebral, the posterior communicating and the choroid arteries. The veins of these bodies, though larger, are less numerous than the arteries. Duret mentions, in this connection, that he never has been able to inject the veins of Galen from any tributary of the longitudinal sinus.

The terminal branches of the arteries of the convolutions may be divided into two sets, those of the pia mater and those entering the substance of the brain. Small arteries, ramifying in the pia mater, are given off directly from the larger as well as from the smaller branches, and it is from the finest that the small nutrient arteries descend directly into the cerebral substance. Duret denies the existence of the network of arterial anastomoses usually described in the pia mater, and explains that one cause of error is that the vessels often lie in two layers. He admits, however, that there are some communications between the arteries of the same side and between the two posterior cerebrals. In view of this paucity of anastomoses and of the present popularity of the theory of the localization of the cerebral functions, it is worth while to give a general account of the author's researches into the source from which the convolutions are supplied. Though unfortunately retaining the antiquated nomenclature of Leuret and Gratiolet, the author has used Ecker's diagrams, and in this report we shall adopt the system of the latter.

The *anterior cerebral artery* gives off several small branches, which supply the under surface of the inner half of the frontal lobe, that is, as far as the H-shaped *sulcus orbitalis;* also the upper surface of the first and second frontal convolutions and the superior part of the anterior cerebral convolutions, sometimes, indeed, passing the top of the fissure of Rolando. The branches of this artery extend, on the inner surface, as far as the *parieto-occipital* fissure, while the arteries of the *corpus callosum* curve round its posterior border, and then run forward, sometimes reaching the posterior commissure.

The *middle cerebral artery* runs in the fissure of Sylvius, and is distributed almost entirely to the convexity. The first branch given off supplies the celebrated third frontal convolution. One branch runs up the fissure of Rolando, and the others supply the outside of the brain as far back as the *parieto-occipital* fissure, and in the temporal lobe back to just beyond and parallel to the *superior temporal* fissure. In short, this artery supplies the parietal and a part of the frontal and temporal lobes.

The *posterior cerebral* artery supplies the occipital lobe and the remainder of the temporal lobe. On the inner surface, it gives to all the convolutions posterior to and below the *parieto-occipital* fissure.

In considering the veins of the surface, Duret attaches great importance to the "grande veine anastomotique" described by Trollard, which, leaving the superior petrosal sinus about its middle, runs in the thickness of the dura mater till it reaches the fissure of Sylvius, where it becomes (or joins) the Sylvian vein, which is of considerable size, and empties into the superior longitudinal sinus. With this exception, the author thinks that too much importance has been assigned to the communications between the veins of the base and of the convexity. He is convinced that the alleged system of anastomoses between the arteries and veins of the pia mater has no existence.

There is little to be said of the nutrient arteries of the convolutions. As already intimated, they are very minute, and may be divided into the cortical and medullary, the former of which end in the grey matter, while the latter penetrate to and ramify in the white.

DR. BRUNTON and Mr. Henry Power, in the *Centralblatt* for July 4th, bring forward reasons founded on some experiments of theirs for rejecting the prevalent theory that digitalis increases the flow of urine by raising the blood pressure in the arterial system. They injected digitalin in considerable doses into the veins of a dog, and drew off its urine by means of a catheter. The injection was followed by great diminution, or even total suppression of the flow of urine, while the blood-pressure rose simultaneously. The authors are inclined to explain the diuretic action of digitalis by assuming that it stimulates the vaso-motor nervous system generally, while it exercises a special action on the vaso-motor nerves of the kidney. From this results a moderate contraction of the vessels of the whole body, with consequent increase of the blood-pressure; while in the kidney the contraction is excessive, and so puts an end to the flow of urine. As soon, however, as the stimulus to the vaso-motor nervous system is removed, the vessels of the kidney relax quickly, and more completely than the system vessels, so that the tension of the blood in the glomeruli of the kidney is still above the normal, although that in the general circulation is below it. This theory is further supported by the fact that albumen appears in the urine after the reëstablishment of the secretion.

Bibliographical Notices.

Experimental Researches on the Physiological and Therapeutic Action of the Phosphate of Lime. By L. DUSART, Ex-interne des Hôpitaux. Second Edition. Paris: 113 Faubourg St. Honoré.

THE original book of Dr. Dusart is a medical work of some value, upon phosphate of lime as a reconstructive tonic and upon the lactic acid solution as an eligible preparation thereof.

The present so-called second edition is an English translation of the same, ingeniously arranged as an advertisement, and published by a wholesale drug house in Paris, having an introduction, evidently intended to be read as from Dr. Dusart, but *not bearing his name*, and containing the only too familiar talk about the inferior preparations of other manufacturers, a little virtuous indignation at the frauds by them practised upon a suffering public, &c. &c. The only reliable preparation is, of course, clearly indicated on the covers. If our readers wish to read Dr. Dusart's book, we hope they will, if possible, read the original, and if they are thereby or otherwise convinced of the value of syrup of lactophosphate of lime, let them not trouble themselves about the French preparation, with anybody's name on the label, but get it from any of the respectable American pharmacists who can and do make just as good a medicine.

BOOKS AND PAMPHLETS RECEIVED.

The Complete Handbook of Obstetric Surgery; or Short Rules of Practice in every Emergency, from the Simplest to the most Formidable Operations connected with the Science of Obstetricy. With numerous Illustrations. By Charles Clay, M.D., late Senior Surgeon and Lecturer on Midwifery, St. Mary's Hospital, Manchester, &c. &c. From the third London Edition. Philadelphia: Lindsay & Blakiston. 1874. Pp. 328. (For sale by James Campbell.)

Surgical Emergencies: together with the Emergencies attendant on Parturition and the Treatment of Poisoning. A Manual for the use of General Practitioners. By William Paul Swain, F.R.C.S., Surgeon to the Royal Albert Hospital, Devonport. With eighty-two Illustrations. Philadelphia: Lindsay & Blakiston. 1874. Pp. 189. (For sale by James Campbell.)

Transactions of the twenty-first Annual Meeting of the Medical Society of North Carolina, held at Charlotte, N. C., May, 1874. Raleigh, N. C. 1874. Pp. 132.

The Relation of Medical Societies to Progress in Science. Inaugural Address of the President of the Medical Society of the County of Kings, New York, Alex. J. C. Skene, M.D., June 16, 1874.

Protection of Animals. By George T. Angell, President of the Massachusetts Society for the Prevention of Cruelty to Animals. Read at the Annual Meeting of the American Social Science Association, 1874.

Clinical Report of the Lying-in Service at Bellevue Hospital, for the Year 1873. By Wm. T. Lusk, M.D. Reprinted from the New York Medical Journal, August, 1874. New York: D. Appleton & Co., 549 and 551 Broadway. 1874.

Smithsonian Miscellaneous Collections. 279. The Toner Lectures, instituted to encourage the Discovery of New Truths for the Advancement of Medicine. Lecture III. On Strain and Over-action of the Heart. By J. M. Da Costa, M.D. Delivered May 14, 1874. Washington: Smithsonian Institution. August, 1874.

Address of Joseph M. Toner, M.D., President of the American Medical Association. Extracted from the Transactions of the American Medical Association. Philadelphia. 1874.

Boston Medical and Surgical Journal.

Boston: Thursday, September 10, 1874.

The New York daily papers recently contained detailed reports of a "Children's Party" at Long Branch, wherein is told with all the enthusiastic rhetoric of the modern school of Bohemianism the story of fine dresses, dazzling jewels, elaborate *coiffures*, late and indigestible suppers, and all the incidents of a fashionable juvenile dissipation at night. It is said that the gentlemen of seven years and the misses of five successfully imitated the social ways and mannerisms of their elders, and that in all respects the dancing, the flirting and the eating were the miniature presentment of adult excesses in the same directions. To the spectators, such an exhibition was doubtless very exhilarating, and the over-dressed mothers believed their over-dressed children were in excellent training.

To us, such a spectacle seems a mockery and a crime; not on its moral side alone, though that is suggestive enough, but because of the physical risks indirectly involved. Recreation is healthful, but when it takes on such an intemperate guise as that described at Long Branch, a type of dissipation much too frequent at resorts of fashion, it is time to protest in the name of common humanity. These children, thus subjected to the exciting and stimulating conditions which full-grown manhood hardly endures without paying grievous penalty, are the buds of promise—not of healthy, well-developed maturity, but of a forced, weakly, unfruitful growth. If such unfortunate germs live (for the chances of living are certainly against them), they will surely appear in the note-books of physicians, in good time, representatives of a numerous class in both sexes—the men, enfeebled and impotent in mind and body, the women anæmic, sterile, the ready victims of gynæcological quackery. Surely there is opportunity enough for reform in education as touching the physical penalties involved; but the reform should begin at the beginning. Whatever errors and prejudices the critics of Dr. Clarke's "terrible little book" may have betrayed, they have been right in this respect, that the seeds of evil are frequently sowed long before physiological periodicity is tampered with. May we not have a Society for the Prevention of Cruelty to Children?

It is generally a discouraging as well as an unprofitable task to peer into the mysteries of the mixtures sometimes called "proprietary"

medicines, more vulgarly denominated "quack remedies." But there is also an entertaining side to an inquiry into the profundities of these medicinal compounds which are made to sell. That peculiar trait in human nature which John Foster christened gullibility, finds manifold methods of contentment. Chemists have made known the proportional amount of alcohol which constitutes the inspiration of the various kinds of "bitters"; and "soothing syrups" and "cough balsams" in vain pretend that their soporific charm is due to something besides opium. Little cares the great public for the warnings of science; for the public loves to be cheated.

Just now a passing fashion is the swallowing of gallons of vile stuff called mineral water. Quite unlike the alcoholic and the opiate preparations by which men are made drunkards and infants drugged out of the world, these waters do good by their harmlessness. We have amused ourselves recently by a cursory glance at the merits of one of these health-bestowing blessings in quart bottles, and make no apology for drawing attention to the wonderfully little required to accomplish miracles of healing. The sample under inspection is called "Nature's great Remedy." By the aid of the State Assayer of Massachusetts, we are enabled to give our readers and the public its exact composition. The figures are as follows:—

"ONE UNITED STATES GALLON CONTAINS

Sulphate of potash	0·101 grains.
Chloride of sodium	0·447 "
Bi-carbonate of soda	0·218 "
Bi-carbonate of lime	4·168 "
Bi-carbonate of magnesia	0·867 "
Sulphate of lime	0·811 "
Silica and alumina	0·043 "
Protoxide of iron	2·161 "
Organic matter ("crenic acid")	2·888 "

It is a chalybeate mineral water, containing an uncommonly large proportion of iron in solution, and it will act as a strong tonic."

Now, as may be seen, every gallon contains of this valuable material the enormous amount of 11·674 grains. Four hundred and eighty grains make one ounce, and every gallon of Nature's great Remedy contains nearly $\frac{1}{40}$ of an ounce of mineral matter, and organic matter known as crenic acid, which latter is found in all soil rich enough for a plant to grow in. That is to say, this Unitoga Spring gives pretty good and pure water, quite as pure as can be found in most wells in the neighborhood of Boston.

To make "Unitoga" at home, for those whose well-water is not sufficiently impure to be medicinal, we have translated the chemical names and given the weights, approximately in fractions of an ounce, which look less formidable than decimals:—

Sulphate of potash . .	$\frac{1}{4752}$ of an ounce.
Common salt	$\frac{1}{1151}$ " " "
Bi-carbonate of soda . .	$\frac{1}{2201}$ " " "
Chalk	$\frac{1}{115}$ " " "
Bi carbonate of magnesia .	$\frac{1}{553}$ " " "
Plaster of Paris . . .	$\frac{1}{591}$ " " "
Flint and clay . . .	$\frac{1}{11162}$ " " "
Protoxide of iron . . .	$\frac{1}{220}$ " " "
Crenic acid (soil) . . .	$\frac{1}{166}$ " " "

Mix the above carefully, and add sufficient clean water to make one gallon. If protoxide of iron be not readily obtained without troubling the market, it may be easily furnished by stirring the mixture with an iron spoon, or allowing a board nail to remain in the mixture over night.

Another water from the same company contains less of the minerals, according to our State Assayer, but "it is highly charged with sulphuretted hydrogen." This can be easily obtained by using for a vehicle the water from some well near to which runs a drain.

In the last two numbers of the *Obstetrical Journal of Great Britain and Ireland*, the American supplement contains a continued article by Dr. William Goodell, the President of the Philadelphia Obstetrical Society. The paper relates to the management of obstetrical cases at the Preston Retreat, of which Dr. Goodell is the Superintendent; it is marked by such a degree of originality as to make it almost a new departure in obstetrical science. We have not space to comment at length on the various topics discussed, but we can fully commend them as suggestive and sensible, if rather startling to conservative minds. One fact is modestly put forth by the author as the result of his measures at the Retreat, namely, that out of 756 cases of midwifery there treated, there have been only six deaths, or a mortality of ·8 per cent. The key-note of Dr. Goodell's practice is found in the following quotation from his paper:—"Labor is, in general, a strictly physiological process, and there is no reason why it should be made to wear the livery of disease." He discards all the paraphernalia usually found in the lying-in room—the bed-pan, the syringe, the antiseptic and detergent lotion, the obstetric binder, the traditional "milk-fever" purge, and allows the patient to follow pretty nearly her natural inclinations in all respects. Surely, the Superintendent of the Preston Retreat is not addicted to "meddlesome midwifery," and, considering the fact that hospitals do not have selected favorable cases as a general thing, but the contrary from necessity, a very excellent showing is made as the result of such open defiance of traditional methods. The paper deserves much attention.

In France, as in England and elsewhere, the respective authorities and the public in general are just now taken up with the question as to the most suitable manner of disposing of their dead, as, in large cities like London and Paris, these occupy so much ground as to become an embarrassment to the living. To obviate the inconvenience of overcrowding, the different governments of France have established cemeteries outside of the walls of the city, or rather, as far as possible from the centres; but the space allotted to the dead and the living, however far apart they may have been originally, soon unite, and, in course of time, they are obliged to seek other ground for the burial of the dead. This removal of the cemeteries at a distance from town is attended with great inconvenience for the proper performance of the funeral ceremonies practised in Christian countries. But, besides these considerations, there are others of equal, if not of greater importance, which ought to be taken into account; I refer to the public health. With the exception of a few of the old school, or *routiniers*, it is admitted by all hygienists that the situation of churchyards or cemeteries in the midst, or even in the vicinity of, living population must be prejudicial to their health. It is this grave question that has led the public mind to the consideration as to the expediency of resorting to the ancient mode of disposing of the dead by incineration or cremation. But, although this question is being agitated in France, or rather, in Paris, I do not think that the French will readily take to cremation, as, notwithstanding their revolutionary spirit, they are great *routiniers*; besides which, if they have no respect for anything in this world, they have great veneration for the dead; and nothing will convince them that cremation will not tend to abolish this sentiment, and the religious rites proceeding from it.—*Paris Correspondent of the British Medical Journal.*

An extract from the report of the Royal Commission on Scientific Instruction and the Advancement of Science, of which the Duke of Devonshire was chairman, for investigating the condition of the various National Scientific Museums, states of the Museum of the Royal College of Surgeons of England:—

"This collection of human, comparative and morbid anatomy was founded in the last century by the celebrated John Hunter. After his decease, the Hunterian collection was purchased by the Government and placed in the keeping of the Royal College of Surgeons, subject to periodical inspection by a board of trustees, which is kept up by coöptation of new members as vacancies occur. Since the collection came into the possession of the College, it has been vastly extended and enriched, and is now probably the most complete and best arranged museum of its kind in existence. It is freely accessible to students; and lectures to members of the College, to which any person interested readily obtains admission, are delivered, on comparative anatomy, by the Conservator, Professor Flower, and, on surgical subjects, by Fellows of the College appointed to that duty, from time to time, by the Council.

"For the purchase of the original or Hunterian collection, and in grants for buildings, the nation has contributed £57,500 towards the expense of this museum; but the entire expense of its maintenance and continued extension, amounting to about £2,500 a year, is discharged by the College out of the fees payable by candidates who pass the examination for the College diploma; and the aggregate sum which has been thus expended far exceeds that supplied by the State.

"The comparative anatomy division of this museum, besides a great osteological collection, contains an extensive series of preparations of the internal organs and other dissected parts of animals, preserved in spirits. Preparations of this description are requisite for a well-grounded study of zoology; and, as no such series exists in the British Museum, this part of the College of Surgeons' Museum may be regarded as supplemental to it. But, although it might seem, on this account, desirable to incorporate the comparative anatomy division of the College of Surgeons' Museum, in whole or in

part, with the zoölogical collections of the British Museum, there appear to be serious objections to such a measure. For, in the first place, by far the greater part of the collection in question being the property of the College of Surgeons, a very large outlay of public money would be required for the purchase of it, were the College willing to part with it, which we have no reason to think probable. Again, so large an increase of spirit preparations in the British Museum would increase the risk of destruction in case of fire; and, lastly, the transference of the comparative anatomy collection to South Kensington would render it much less conveniently accessible than it is at present to students attending medical schools, who now make use of it.

"Should the fund at the disposal of the College, owing to changes in medical legislation, or from any other cause, prove inadequate for the efficient maintenance and continued extension of the museum, we are of opinion that it should receive support from the State as an institution intimately connected with the progress of biological science in this country. At the same time, there seems to be no sufficient reason why it should, in such a case, pass from the custody and management of the College, under which it has so long and so greatly prospered."

Amongst the donors to this interesting collection are Professors Gervais, of Paris, Julius Haast, Quatrefages, Sir William Fergusson, Captain Harris, Drs. Fayrer, Watts, Dowse, Goodhart, &c., and Messrs. W. M. Baker, T. C. Jackson, J. Birkett, J. Gay, Rivington, McCarthy, Crowther, Garrod, Duncan, Mrs. Wormald, &c., and, as usual, the Zoölogical Society, the Smithsonian Institution, &c.—*British Medical Journal.*

Influence of Chloroform in Labor upon the Fœtus.—Dr. Zweifel, of the Obstetric Clinics in Strasbourg, has recently made some investigations that would seem to imply that the anæsthetic administered to women in labor has more effect upon the fœtus in utero than is perhaps generally admitted. Dubois has made the statement that anæsthesia of the mother causes increased rapidity of the fœtal heart-beats. The writer had often observed an appearance of icterus upon newly born children after the use of chloroform, but could not with certainty attribute it to the latter. His attention was at first seriously arrested by perceiving in the breath of an infant, born a few hours before, a distinct odor of chloroform. The child had been extracted while the mother was under the influence of the anæsthetic, but since the delivery had lain in a room by itself, where no chloroform had been used. Shortly after this, in order to determine positively whether the anæsthetic was conveyed to the fœtus through the maternal circulation, he instituted the following test:—A fresh placenta that had just been expelled by a woman to whom chloroform had been administered for only about fifteen minutes, and more than an hour previously, was placed in a close-fitting vessel, having first been cleansed of all adhering clots. The following day, when the vessel was opened, a decided odor of chloroform was perceived, and further examination proved conclusively the presence of the drug. By still another test (the examination of the child's urine), the writer was able to establish the fact of the influence of the anæsthetic upon the fœtus. In conclusion, the writer observes that, since the use of narcotics in general are contra-indicated in infants, it is an important question for obstetricians to decide, to just what degree anæsthesia may be carried in women in labor with impunity to the fœtus.—*Berliner Klinische Wochenschrift; New York Medical Record.*

The Treatment of Hydrocele by Alcoholic Injections.—It is only about a year ago that the treatment of hydrocele by alcoholic injections was all the rage in the Paris hospitals, but from the disappointment met with as to its curative powers, the method is already consigned as a thing of the past. M. Tillaux, of the Lariboisière Hospital, and others have given it a fair trial, but they were obliged to have recourse to the iodine cure,

as relapses had occurred after the alcoholic injections. M. Tillaux, however, has hopes of its utility in children. He injects about fifteen drops of a strong alcohol into the tunica vaginalis, leaving, as with adults, the fluid of the hydrocele in the sac; but further experience is necessary before an opinion can be formed as to its efficacy in these cases. A Dr. Surmay, a provincial practitioner, has somewhat modified Dr. Monod's plan of leaving the fluid in the tunica vaginalis, and before injecting the alcohol he draws off the fluid, so that the alcohol which he employs, pure but weak, is in direct contact with the serous cavity, and thus produces a sufficient degree of inflammation to effect obliteration. He has found one injection insufficient, and has recourse to a second, which in general effects a cure. Out of twenty cases treated in this way he has had eighteen cures, but time alone will decide whether these will be permanent.—*Paris Correspondence of the Medical Times and Gazette.*

PULSATION is frequently seen in the epigastric region. Sometimes this is associated with absence of the apex-beat from its usual position, and is to be regarded as one form of its displacement—a displacement which may be brought about in various ways, the commonest of these being dilatation of the right ventricle, by which the left ventricle is pushed backwards, the right one communicating its impulse to the lower part of the sternum and to the liver, which is then seen to pulsate in the scrobiculus cordis. It may be doubted if such pulsations are ever visible in a perfectly normal condition of the heart and neighboring organs. Assuredly, they are often seen where no actual cardiac disease exists; simple dilatation of the right ventricle is invariably more or less present when pulmonary congestion exists, even from such simple and temporary causes as strenuous exertion or bronchial catarrh; and whenever dilatation of the right side exists to any considerable extent, epigastric pulsation may be seen. It is rendered more perceptible by any cause which may effectively conduce to the transmission of such impulse to the abdominal walls. Thus it is sometimes favored by the existence of effusion in the pericardium; but especially by the occurrence of enlargement of the liver, which is so frequent a concomitant of dilatation of the right ventricle. Indeed, in such circumstances, the systolic impulse of the venous regurgitation itself is occasionally so great as to induce actual pulsation of the whole liver, a pulsation which is then visible, not merely in the scrobiculus cordis, but throughout the whole right hypochondriac region; an extent of hepatic pulsation which is not, however, always distinctive of great venous regurgitation, as it is occasionally seen as the result of the impulse communicated by a large aneurism lying immediately above the liver.—"On the Diagnosis of Disease of the Heart," by GEO. W. BALFOUR, M.D.—*Edinburgh Medical Journal; Medical Times and Gazette.*

IN further examining the condition of our patient, we first feel both radial pulses simultaneously, noting whether the arteries are firmer or more tortuous than usual (atheroma). If there be a marked difference between the two radial arteries, we feel both brachials simultaneously; if these be equal, the difference between the two radials is due to irregular distribution. If the brachials differ, in all probability there is some abnormal physical cause to account for it—possibly an aneurism. Should the radial pulses be equal and regular, but small and feeble, we elevate the wrist to a level with the head, if the patient be standing or sitting; if lying, we elevate the arm to its full length perpendicularly to the body. Should the pulse then become extinguished, or nearly so, the patient is anæmic, and possibly anæmia is his sole disease, but we must never, under any circumstances, rely upon one symptom, however apparently trustworthy, but merely note it as an aid and a guide in our further investigation. Should the pulse, after elevation of the arm, remain still small and feeble, but distinct, the cardiac disease, if present, is mitral. Irregularity of the pulse confirms this suspicion; extreme irregularity points to the probability of the affection of the mitral valve being constriction rather than dilatation. Should the small, feeble, and possibly ir-

regular pulse remain, not only distinct after the elevation of the arm, but become more so, the systolic impulse being followed by such a sudden and complete collapse as to render the impulse apparently more marked, then we have to do with a double lesion, a mitral and also an aortic regurgitation. This form of pulse is, however, not always well marked; in many cases it is not easy of detection, and is therefore not to be relied upon unless the collapse is distinct. In simple aortic regurgitation, however, the peculiar sensation conveyed to the finger, and well known by the terms hammer or Corrigan's pulse, is usually well marked, and frequently so greatly increased by elevation of the arm as to become almost painful, and wholly unmistakable. —"On the Diagnosis of Disease of the Heart," by GEO. W. BALFOUR, *Edinburgh Medical Journal*, June, 1874—*Medical Times and Gazette.*

Correspondence.

SELF-REGISTERING THERMOMETERS AGAIN.

PROVIDENCE, Sept. 5, 1874.

MESSRS. EDITORS,—Having had the same difficulties as Dr. Barnes describes in his note upon repairing self-registering thermometers, and not ever succeeding with his plan of restoring the index, permit me to suggest another method.

Cool the bulb till a small space is visible above the mercury, then quickly invert the instrument, and, holding it perpendicularly between the thumb and fingers, strike a sharp blow—ramrod fashion—upon a thick and not too solid rubber eraser laid flat upon the arm of your chair. A minute portion of the mercury will so be thrown past the empty space into the tube, and may be shaken further up to serve as the index. If it is not of the right size, shake it back into the bulb and try again.

The instrument I have used has been a plain straight one, graduated on the tube; but I think this plan can be tried on any instrument, if it be carefully held. Yours respectfully, CHARLES H. LEONARD, M.D.

LETTER FROM MUNICH.

MUNICH, August 15, 1874.

THE museum here is a model; not so large, indeed, as some I have written of, but in admirable order and well nigh perfect in its way. The pathological collection is separate and comparative anatomy is almost wholly excluded, so that it is all but exclusively devoted to normal human anatomy, to teach which is its *raison d'être*. Among the most noteworthy features are the specimens of embryology, near which are beautiful wax models of the early stages of certain mammalia, made to illustrate Prof. Bischoff's original researches. Prof. Rüdinger has just completed some series showing the development of some of the facial bones. He has made, also, many excellent sections of the temporal bone, with the foramina and grooves painted in different colors, for greater convenience of demonstration.

Frozen sections abound, not only those through the joints, but others through the entire body. Though the latter are not all placed in the museum itself, I had the opportunity of seeing one which is figured in Rüdinger's topographical anatomy, which is now in course of publication. It was a vertical antero-posterior section through the right side of the body, traversing the lung, liver, kidney, intestines, as well as the scapula and the hip-joint. It was perfectly preserved in spirits. Some may think that in the Munich school the use of frozen sections is carried to excess; and it certainly is true that no student can understand them until he is tolerably familiar with the shape of the various structures as taught in descriptive anatomy, but it is held here that it is not necessary to be very far advanced in the latter before he can grapple with topography, but that, on the contrary, the study of one of these branches helps that of the other.

Here are also Rüdinger's magnificent corrosion preparations and many of his dissections photographed in his works on the ear and on the nerves. The finest of these is that showing the distribution of the sympathetic and pneumogastric. The nerves do not show quite so clearly in the specimen as in the pictures, but nevertheless there is nothing figured in the latter that does not exist in the former. If the museum has a weak point, it is in preparations showing the fasciæ, which are almost wholly ignored; but it is only in France that the same criticism may not be made of any museum. I have mentioned only the most striking features, but the museum is full of ingenious preparations for the illustration of special points, which go far to enhance its value. T. D., JR.

LETTER FROM VIENNA.

[From our Regular Correspondent.]

VIENNA, AUSTRIA, August 2, 1874.

MESSRS. EDITORS.—The cholera conference has closed its labors, for the present, with the twentieth meeting.

Yesterday, the members of the conference gave a dinner party in honor of their President, Baron von Gagern, in Hitzing. They exchanged their photographs with each other, and parted in the most friendly and cordial manner. They signed, also yesterday, the *Protokoll*, and the President declared the session of 1874 closed. Two Spanish delegates appeared a few days ago, but no one from the United States. On account of the non-appearance of any representative from our country, the discussion regarding the yellow fever question has been postponed to some future day.

The conference have agreed to suggest to the governments which they represent to send a delegate to a permanent congress, the headquarters of which are to be in this city. This scientific body shall send competent persons to all the places where zymotic diseases occur, for the purpose of studying the same, their causes, their extent, and make such suggestions as will tend to prevent their propagation; to examine all the known disinfectants and publish the mode of treatment which, in their opinion, might be best adapted to cure patients affected with contagious diseases. It is to be hoped that the coöperation of all the civilized nations on the face of the globe will be represented at this congress, and thus be always informed of the occurrence of any contagious disease in any part of the world.

The President made a parting speech, of which the following is the substance:—"Arrived at the end of our labors, the conference deems it necessary, in an act signed by all the members present, to enumerate or to recapitulate all the resolutions that were adopted and passed, in order to answer all the questions that were contained in their programme. As one of the representatives of the committee for the preparation of the preliminary labors of the commission, I deem it my duty to state that the conference has done everything in their power to come to an agreement, its highest aim being the interest of the public health and that of international commerce. Without doubt, an agreement upon all points would have been very desirable, but the force of circumstances in the discussion of such vital and important points, as could be expected, made this somewhat difficult; but still, for the present, we must be contented with the results, as they are the first step to a general agreement in the future.

"As regards the scientific part of your programme, the conference came to the same conclusion as that arrived at, at Constantinople, a few years since, without being able to clear up the dark points in the history of cholera, since that time no important discoveries having been made. Two questions arose as to the prophylaxis and the protection against infected and cholera-suspected provinces, at the different seaports where disease might be propagated to a healthy community by a steamer or vessel coming from such an infected port.

"The two systems, of which each has its advantages and disadvantages, were discussed and maintained by each party with equal tenacity, the one

claiming the utility and necessity of the strictest quarantine, the other being in favor of a thorough inspection of each incoming vessel, the establishment of hospitals for the reception of persons affected with zymotic diseases, the separation of the healthy from the sick, but no detention of the former, *no* quarantine; and, finally, both these methods were proposed to be tried. Simple inspection and revision, and again, on the other hand, some favored the existing quarantine regulations against cholera. The conference, however, voted almost unanimously against quarantine regulations on land; that is, people or merchandize being transported by land should not be interrupted before arriving at their destination on account of coming from a place where zymotic diseases might occur at the time of the departure of persons or things. In regard to river transportation, the same measures were adopted as in case of transportation on the high seas. Strict inspection, revision, separation of the healthy from the sick, the proper use of disinfectants, &c. That part of the programme regarding the establishment of an international commission against epidemic diseases has been adopted, the financial question to be left in the hands of the diplomacy."

Finally, he begged them to sign the *Protokoll*, in order to present it to the different governments which they represent, for the purpose of establishing a general system, one law governing all the nations who participated at the conference; not that each country, as is the case now, should have quarantine regulations of their own.

On the whole, it seems to me that the Congress have not advanced our knowledge regarding contagious diseases, but admitted that very little is known respecting their origin, their prevention, their cure. They expressed their doubts, even, as to great benefits that were thought to be derived from the use of disinfectants, but as nothing better was known, they still recommended their use. The establishment of a permanent committee to study thoroughly these vital questions seems to be the wisest and most important resolution adopted.

The detention of vessels coming from an infected port, or having a case or two of contagious disease on board, for weeks after their arrival with valuable cargoes and hundreds of passengers, costs often thousands of dollars and considerably disturbs the commercial intercourse of two distant cities or countries, and is worth while being fully discussed by competent authorities. On the other hand, if through too lenient measures the lives of the citizens of a healthy city should be jeopardized, no quarantine measures would be too strict, too severe to prevent such a calamity. In my opinion, no country is more interested in clearing up these important, yet unanswered, questions than the United States. Holding, as we do, intercourse with all parts of the world, and having the greatest commercial interchange with all the nations on the face of the globe, we should take an active part in the deliberations of such scientific conferences, and I can only again regret that the United States have sent no one to the Congress that has just closed its session.

Very respectfully yours, RUDOLF TAUSZKY.

JOURDAIN REDIVIVUS.

BOSTON, Sept. 3, 1874.

MESSRS. EDITORS,—Among the petitions presented to the Board of Aldermen at their last meeting was one from William H. Gertz, asking for a license for a "Museum of Natural History and Science" at 542 Washington Street.

Going by Jourdain's "Gallery of Anatomy," this morning, I noticed that the name of "Jourdain" had been carefully painted out, and I further noticed that the number was *five hundred and forty-two!*

Putting two and two together, it looks as if "Dr." Jourdain was tired of waiting for *his* license and had adopted this subterfuge.

As the JOURNAL was so forward last winter in abating the Jourdain nuisance, I thought you might like to have your attention called to this new move.

W. C., JR.

Medical Miscellany.

DR. BUDD estimates that an average of 15,000 persons die, and 140,000 are attacked, annually in England by enteric fever.

DR. WESTPHAL, who for some time held the office of Director of the Department for Diseases of the Mind and Nervous System in the Charité Hospital, has been appointed ordinary Professor of Psychological Medicine in the University of Berlin.

AMBULANCES.—Philadelphia has an ambulance station in telegraphic communication with all the police stations, so that a summons for medical aid and an ambulance may be sent from any section. A surgeon will be promptly despatched, with all needful appliances, to the scene of accident.

THE NEW MEDICAL DIRECTORY OF MASSACHUSETTS is making satisfactory progress, and will be published early in October. We have been favored with an examination of the proof-sheets, and can bear witness to the thoroughness with which the work has been done. Physicians will find the book as indispensable as a dictionary.

"THE PARIS MEDICAL RECORD" is the title of a new venture in medical journalism. The Editor states his conviction that, "notwithstanding the great number of medical periodicals in existence, the thirst for knowledge is so intense that the supply is still far short of the demand." Hence this very promising bi-monthly review of the progress of medicine. The journal is published in Paris in the English language, and the initial number is made up mainly of translations of lectures and other contributions to medical science by the Paris professors.

TREATMENT OF ZONA BY COLLODION AND MORPHIA.—Dr. Bourdon, Hôpital la Charité, after having tried a great many local means for treating the above disease, and checking the intense pain, has definitively adopted the following plan:—Without opening the vesicles, he paints all the diseased surface with a combination of collodion and morphia—collodion one ounce, morphia eight grains. The mixture must be put on pretty thickly. The pain ceases from the second day, and at the end of seven or eight days, when the layer of collodion is removed, all the vesicles have disappeared, and there remains only a slight local redness.—*Canada Lancet.*

IT is contemplated to erect a memorial statue in honor of Ephraim McDowell, M.D., of Kentucky, the *founder of ovariotomy.* The appeal for aid to the project is first made to the women of the world who have been rescued by ovariotomy; next to the members of the medical profession, whose resources have been so greatly increased; lastly, to all who appreciate this advance in surgery, and its originator as worthy of the gratitude of the human race. All contributions to the memorial fund should be sent by money-order or registered letter, addressed to Dr. James M. Keller, No. 58 Green Street, Louisville, Ky., who has been appointed secretary and treasurer by the committee.

SWALLOWING A TOOL-CHEST.—It is reported that in the different prisons of Paris there are five or six deaths every year from the effects of swallowing what is known as an "escape-box." This remarkable box is made for the special accommodation of prisoners. It is of polished steel, about three inches long, and contains turnscrews, hammers, silk thread, and other implements necessary for escape. The box appears to be easily swallowed, but sometimes fails to reappear as intended, and the death of the victim is the result. But, when it does pass the bowels, the lucky prisoner is prepared to cut the thickest iron bars and set himself at liberty.—*New York Medical Journal.*

PETRIFACTION VERSUS CREMATION.—Dr. Steinbeis, of Würtemburg, proposes to dispose of the dead by placing the body in a trough of cement, and then filling the space with liquid cement, which will harden and convert the whole into a solid mass of stone. The blocks thus obtained may be piled up, buried, or inscribed and set up to do duty as both tombs and tomb-stones. This method, if generally adopted, possesses some advantages for posterity, as future generations would probably use the obsolete blocks for building material.—*New York Medical Journal.*

ATROPIA IN PHTHISICAL SWEATING.—Dr. James W. Williamson reports, in the *Lancet* of July 25th, the results of Dr. A. H. Hassall's experience with atropia in the night-sweating of phthisis. In sixteen cases in which the remedy was tried, he found the perspiration either wholly arrested or materially diminished; but in only one-fourth of the number was the effect permanent. The dose given was one-eightieth of a grain, in the form of pill, with extract of gentian. The quantity was increased, as it seemed necessary, to one-sixtieth or one-fiftieth of a grain. The watery solution of atropia was found liable to spoil, and inferior in its effects to the solid dose as administered. In some patients, the sensibility to the atropia rendered its use inadmissible; but in a large class of cases it is believed that it will answer a good purpose after other remedies have failed. The cases above mentioned were treated in the Royal National Hospital for Consumption, Ventnor.—*New York Medical Journal.*

UNPLEASANTLY SUGGESTIVE.—From an address by the President of the Massachusetts Society for the Prevention of Cruelty to Animals, we quote the following:—

"It is estimated that about six per cent. of cattle, and about nine per cent. of sheep and swine, nearly 600,000 in all, annually die on the passage to market from the west, and a large portion of these are sold in our markets, either as meat, or rendered into cooking lard; while the cattle that get through alive, for the want of food and water, and by reason of the cruelty inflicted upon them, after losing on the average, in transportation, nearly a hundred pounds each in weight, from the most juicy and nutritious parts of the meat, come out of the cars full of fever, and with many bruises, sores and ulcers; and these, together with smaller animals, to which the loss and suffering is, in proportion, equally great, are all sold in our markets for food."

DIED,—At Bethlehem, N. H., Sept. 4th, Jeffries Wyman, M.D., of Cambridge, aged 60.

MORTALITY IN MASSACHUSETTS.—*Deaths in sixteen Cities for the week ending August 29, 1874.*

Boston, 167; Worcester, 34; Lowell, 42; Milford, 3; Chelsea, 14; Cambridge, 35; Salem, 16; Lawrence, 21; Springfield, 23; Lynn, 18; Gloucester, 7; Fitchburg, 3; Newburyport, 2; Somerville, 12; Fall River, 36; Holyoke, 7. Total, 440.

Prevalent Diseases.—Cholera infantum, 122; consumption, 50; diarrhœa and dysentery, 28; typhoid fever, 13.

The mortality from prevalent diseases does not show any material change as compared with last week.

F. W. DRAPER, M.D.
Secretary pro tem. of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, Sept. 5, 183. Males, 90; females, 93. Accident, 4; apoplexy, 3; inflammation of the bowels, 4; disease of the bladder, 1; bronchitis, 1; congestion of the brain, 4; disease of the brain, 3; cancer, 3; cholera infantum, 44; cholera morbus, 2; consumption, 26; convulsions, 1; debility, 2; diarrhœa, 9; dropsy of the brain, 2; drowned, 2; dysentery, 4; diphtheria, 1; scarlet fever, 1; "congestive" fever, 1; typhoid fever, 8; disease of the heart, 6; hæmorrhage, 1; homicide, 1; intemperance, 1; intussusception, 1; jaundice, 1; lockjaw, 1; disease of the kidneys, 1; congestion of the lungs, 3; inflammation of the lungs, 10; marasmus, 16; old age, 4; paralysis, 2; pyæmia, 1; starvation, 1; suicide, 1; teething, 3; whooping cough, 3.

Under 5 years of age, 107; between 5 and 20 years, 9; between 20 and 40 years, 32; between 40 and 60 years, 17; over 60 years, 18. Born in the United States, 147; Ireland, 30; other places, 6.